

Claims

1. A method for producing fullerene characterized in that an arc discharge is generated between a pair of carbon rod electrodes and gas containing carbon is supplied to a part between the pair of carbon rod electrodes.
2. The method for producing fullerene according to claim 1, characterized in that the gas containing carbon is continuously supplied to the part between the pair of carbon rod electrodes.
3. The method for producing fullerene according to claim 1, characterized in that the gas containing carbon includes hydrocarbon gas as a main component.
4. The method for producing fullerene according to claim 3, characterized in that the gas containing carbon includes methane.
5. The method for producing fullerene according to claim 3, characterized in that the gas containing carbon includes sulfur.
6. The method for producing fullerene according to claim 5, characterized in that the gas containing carbon includes methane and hydrogen sulfide.
7. The method for producing fullerene according to claim 5, characterized in that the gas containing carbon is allowed to pass through thiophene so that the gas containing carbon includes sulfur.
8. The method for producing fullerene according to claim 7, characterized in that the gas containing carbon is bubbled in thiophene so that the gas containing carbon includes sulfur.

9. The method for producing fullerene according to claim 1, characterized in that hydrogen gas is supplied in addition to the gas containing carbon to the part between the pair of carbon rod electrodes.
10. The method for producing fullerene according to claim 1, characterized in that inert gas is supplied in addition to the gas containing carbon to the part between the pair of carbon rod electrodes.
11. The method for producing fullerene according to claim 1, characterized in that inert gas and hydrogen gas in addition to the gas containing carbon to the part between the pair of carbon rod electrodes.
12. The method for producing fullerene according to claim 1, characterized in that the carbon rod electrode of the pair of carbon rod electrodes serving as an anode includes catalyst metal.
13. The method for producing fullerene according to claim 12, characterized in that the catalyst metal is composed of one or two or more of metals selected from a group including Co, Ni, Sc, V, Cr, Mn, Fe, Cu, Y, Zr, Nb, Mo, Pd, Ta, W, Au, Th, U, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm and Lu.
14. A device for producing fullerene comprising:
 - a pair of carbon rod electrodes; and
 - a gas supply means capable of continuously supplying gas containing carbon to a part between the pair of carbon rod electrodes.
15. The device for producing fullerene according to claim 14, characterized in that

one of the pair of carbon rod electrodes has a through hole opened to the part between the pair of carbon rod electrodes and the gas supply means can supply the gas containing carbon to the part between the pair of carbon rod electrodes through the through hole.

16. The device for producing fullerene according to claim 14, characterized in that the gas supply means includes a pipe having a nozzle opposed to the part between the pair of carbon rod electrodes.

17. The device for producing fullerene according to claim 14, characterized in that a material gas supply source is further provided for supplying the gas containing carbon to the gas supply means.

18. The device for producing fullerene according to claim 17, characterized in that the material gas supply source is adapted to supply gas containing hydrocarbon gas as a main component to the gas supply means.

19. The device for producing fullerene according to claim 14, characterized in that a hydrogen gas supply source is further provided for supplying hydrogen gas to the gas supply means.

20. The device for producing fullerene according to claim 14, characterized in that an inert gas supply source is further provided for supplying inert gas to the gas supply means.

21. The device for producing fullerene according to claim 14, characterized in that a hydrogen gas supply source for supplying hydrogen gas to the gas supply means and

an inert gas supply source for supplying inert gas to the gas supply means are further provided.

22. The device for producing fullerene according to claim 17, characterized in that the material gas supply source is adapted to supply methane to the gas supply means.

23. The device for producing fullerene according to claim 17, characterized in that a sulfur adding means for adding sulfur to the gas containing carbon is further provided between the material gas supply source and the gas supply means.

24. The device for producing fullerene according to claim 17, characterized in that a hydrogen sulfide supply source for supplying hydrogen sulfide to the gas supply means is further provided.

25. The device for producing fullerene according to claim 14, characterized in that the carbon rod electrode of the pair of carbon rod electrodes serving as an anode includes catalyst metal.

26. The method for producing fullerene according to claim 25, characterized in that the catalyst metal is composed of one or two or more of metals selected from a group including Co, Ni, Sc, V, Cr, Mn, Fe, Cu, Y, Zr, Nb, Mo, Pd, Ta, W, Au, Th, U, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm and Lu.